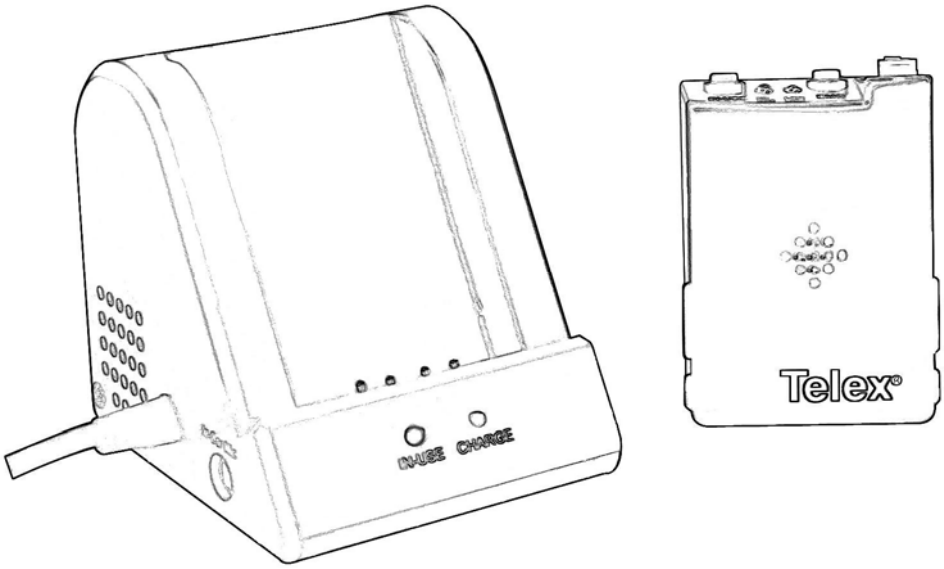
Telex®

PW24-2



2.4GHZ WIRELESS SYSTEM FOR POLICE VIDEO RECORDING

USER GUIDE

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QUICK SET UP AND OPERATION

Synching Up The Transmitter and Base

1) Turn the transmitter power switch to on and place the transmitter in the recharge cradle of the base. The transmitter goes in the base with the beltclip facing out.
2) The recharge LED will light (Green if fully charged, Red if charging) and the In-Use Green LED on the base and transmitter will flash 3 times.
3) The transmitter and base are now synched and will continue to be until another transmitter is linked to that base or the base is powered down.

Normal Operation

4) With the transmitter synched up, remove it from the cradle, plug in the lapel microphone (if used) and place the transmitter on your belt.
5) To start the recording, press the In-Use button and the In-Use LED will light a constant green and you will hear a short beep
6) To end recording, press the In-Use button and the In-Use LED will turn off and you will hear a short beep.
7) At the end of your shift turn the transmitter off and replace it in the charging cradle.

Out of Range

8) If you use the Transmitter too far away from the Receiver during recording, the transmitter will alert you with Audible warning beeps (two tone) and the In-Use LED will blink in red.
9) Move closer to the receiver base and the link will be re-established once you return to normal range. The In-Use LED will light constant green when link is back to normal operation.
10) If the link is not re-established within 30 seconds, the transmitter and receiver will return to standby mode.
11) If you went out of range in Standby mode, or the unit reverted to standby mode, re-enter normal range and press the In-Use button. Operation will return to normal.
12) If you will be out of range for a long period of time, turn the bodypack off.

Low Battery Warning

13) If the transmitter Low BATT indicator (red) starts flashing or you hear warning beeps, return the transmitter to its cradle on the receiver to fully charge the transmitter.
14) The Charge LED indicator will light constant green when the unit is fully charged.

EMG Panic Button (if wired for use in your vehicle)

15) The EMG or Panic Button can be programmed to do many things but may not be connected in your vehicle. Check with your technical department to understand what this button will control before you use it.
16) In Record mode: Press the EMG button on the transmitter, a beep will sound and the relay will be triggered at the receiver.
17) In Standby mode: Press the EMG button on the transmitter, a beep will sound, the green In-Use indicator will blink and the relay will be triggered at the receiver.

Auto Talk (if video recording equipment supports)

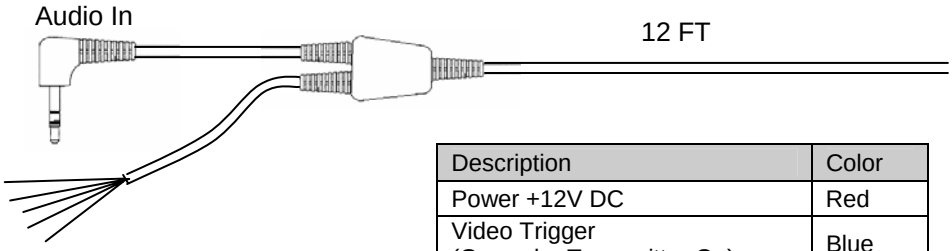
18) The Auto Talk feature is used to turn on the microphone whenever the video recorder is turned on. Some video record units can be triggered by other events (lights and siren being turned on etc.) and Auto Talk ensures the

microphone starts recording at the same time. The transmitter must be turned on and in standby mode.

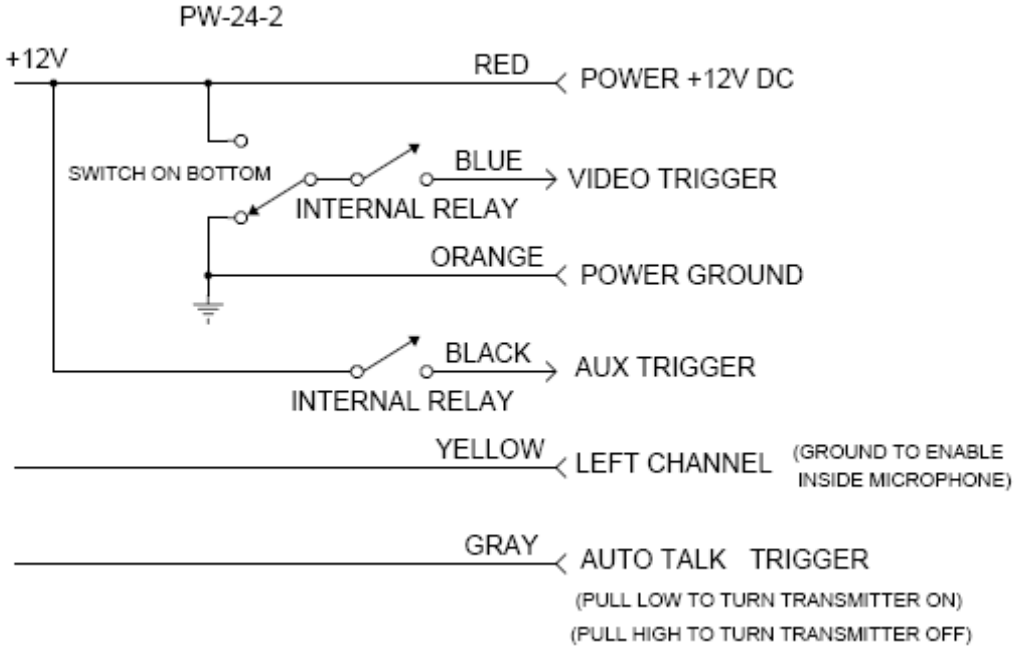
19) A +5V signal on the Auto Talk line means the microphone is off.
20) 0V or ground on the Auto Talk line turns on the microphone

INSTALLATION

1. Wire the un-terminated signal wires to the control unit according to the signal chart. A 5 Amp fast blow fuse is recommend in the 12VDC power supply line to protect the equipment.

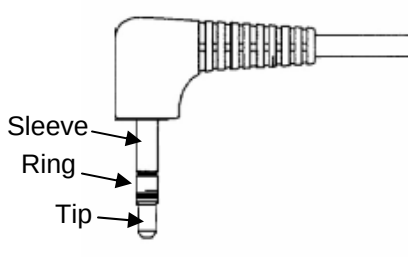


Description	Color
Power +12V DC	Red
Video Trigger (Ground = Transmitter On)	Blue
Left Channel (Ground to enable Inside Microphone)	Yellow
Power Ground	Orange
AUX (Panic) Trigger 12V+ DC Output when EMG button is pushed	Black
Auto Talk Trigger 5V+ DC to 0V to turn on mic 0V to 5V+DC to turn off mic	Gray



2. Plug the 3.5mm stereo plug into the audio input jack of the recording device.

Description	Position
Inside Car Mic Audio	Tip
Transmitter Audio	Ring
Audio Ground	Sleeve



3. If it is to be used, plug in the in-car microphone into the In-Car Mic jack in the side of the receiver base.

4. Turn on the transmitter and place it in the charging cradle with the beltclip facing out. The Charge LED will light and the In-Use LED will flash three times. If these lights do not come on, check the connections and repeat.

Installation is complete. Refer to Operation Section for more information.

4) Guidelines and recommendations for best performance.

Compatibility
The transmitter and receiver must synchronize to work together by placing the transmitter into the charging cradle while on. The In-Use LEDs will flash three times and the two are synchronized. Any PR24 can be synchronized with any PB24 base.

Using Multiple Wireless Systems
The PW24 system has 40 possible "channels" that are really different frequency hopping schemes. Each synchronized base and transmitter will automatically find a clear channel so up to 40 systems can work together in one location depending on other interference problems.

Potential Sources of Interference
There are many potential sources of interference for your wireless system. Any electronic product that contains digital circuitry including digital signal processors (reverb/multi-effects units), electronic keyboards, digital lighting controllers, CD and DVD players, and computers, all emit RF energy that can adversely affect the performance of your wireless system. It is always best to place the receiver as far away as possible from these devices to minimize potential problems.

The PW24 operates in the 2.4MHz ISM band and other devices in that band may interfere. The spread spectrum technique used in the PW24 is very robust and should operate even in the presence of other 2.4MHz devices such as walkie-talkies, LANs, cordless phones, etc. in the area.

Battery Recommendations
The Lithium-Ion battery built into the PB24 transmitter will work at full capacity for over 500 charge cycles. If you notice lower than usual battery life over time, it may be time to replace the cell.

5) Trouble Shooting Guide

Problem	Possible Causes	Solutions
No audio and no In-Use LED light on the receiver when transmitter is on and In-Use	Receiver is not powered	Make sure that the power supply is properly connected
	Transmitter and receiver not synchronized	Turn on transmitter and place in recharge cradle. In-Use LEDs should flash 3 times and the pair will be synched
No (or low) Audio with all In-Use LEDs solid green	Lapel Microphone not connected or positioned properly	Check the mic connection and placement of the microphone
	Receiver audio output cable is damaged or disconnected	Connect, repair or replace cable
Interference	Another 2.4GHz device in the area causing interference.	Push the In-Use button and the PW24 will automatically select a clearer channel. If the interference is too strong, this may not completely eliminate it.
Short range or drop-outs	RF reflective metal obstacles between the transmitter and receiver	Move the obstacles, or reposition the receiver if possible
In-Use LED on beltpack flashes red and two tone beep sounds	Transmitter is out of range	Move closer to the receiver.

PR24 RECEIVER BASE STATION

Indicators	
INUSE LED:	GREEN
CHARGE LED :	CHARGING -> RED
	FULL CHARGED -> GREEN
Connections	
In Car Mic	2.5mm Mono Plug
Un-terminated Cord	
RED	+12V DC Power
BLUE	Microphone Trigger (Ground or 12VDC = Transmitter On)
BLACK	AUX (Panic) Trigger (+12V when EMG is pushed)
YELLOW	Left Channel (Inside Mic)
ORANGE	Power Ground
GRAY	Auto Talk (5V = mic off, 0V = mic on)
Audio Connector	
Tip	Inside Car Mic
Ring	Transmitter Audio
Sleeve	Audio Ground
RF Specifications	
Frequency Range:	2.4GHz
Number of Channels:	40 possible
Diversity:	Internal antenna
Receiver Type:	DSSS
RF Sensitivity:	-102 +/-3 dBm(I,Q signal level at -3dB point))
FCC type acceptance:	Approved under Part 15
Audio Specifications	
Frequency Response:	200 ~ 3400Hz +/- 3 dB
Audio Output Level:	3.6Vp-p
Distortion:	Less than 2%
Signal to Noise Ratio:	> 40 dB
Dynamic Range:	> 50 dB
General Specifications	
Range	800 feet typical
Power Supply:	External 12 VDC
Current Draw:	190mA Typical
Size:	2.75in x 2.99in x 3.15in
	70mm x 76mm x 80mm
Weight	233 g

PB24 Bodypack Transmitter

Controls	
On/Off Switch	
In Use Button	
Emergency Button	
Indicators	
Red LED	low battery indicator/Emergency indicator
Yellow LED	In Use
Battery	Internal Li-ion 3.7V/1300mAh cell
Battery Life	8 hours In Use with full charge
	14days Standby
Battery Recharge Time	3.5 hours from full discharge
Antenna	Internal
2.5mm Mic Connector	Tip Signal
	Sleeve Ground
Secondary Microphone	Internal
RF Output	30 ~ 40 mW (typical)
Size	2.5 in. x 1.8 in. x 0.94 in.
	64 mm x 46 mm x 24 mm
Weight	74 g

Factory Service (North America)

If factory service is required, ship the unit prepaid in its original carton to:

Telex Audio Service
c/o Telex Communications
8601 East Cornhusker Highway
Lincoln, NE 68507-9702 U.S.A.
Tel: 402/467-5321 or 800-553-5992
Fax: 402/467-3279
Enclose a note describing the problem along with any other pertinent information and how to contact you.

Warranty (Limited)

Telex products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid via UPS Ground.
Exclusions and Limitations: The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific described in the individual product-line statement(s) below,
or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice or any of its authorized service representatives.
Obtaining Warranty Service: To obtain warranty service, the customer must deliver the product, prepaid, to Telex together with proof of purchase of the product in the form of a bill of sale or receipted invoice.
Incidental and Consequential Damages Excluded: Product repair or replacement and return to the customer are the only remedies provided to the customer. Telex shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use.
Other Rights (United States Only): This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.
Telex 2.4GHz Wireless Systems are guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year from the date of original purchase. The Limited Warranty does not extend to cables or cable connectors. Additional details are included in the Uniform Limited Warranty Statement. Technical Assistance: 800-392-3497(U.S. and Canada only)

ACCESSORIES AND PARTS

Police Wireless PW24

Model	Part #	DESCRIPTION
PB24-2	302039002-2	Bodypack transmitter with internal microphone, internal Li-ion battery cell, belt clip, no microphone
PR24-2	302039003-2	Receiver and recharge station, un-terminated connection cable
TC-24	302039004	Optional TX Charger Base for PB24-2
KT24-ML	302039007	Lapel Microphone for PB24-2
PW24-MI	302039005	In Car Microphone